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Notice of Allowability

Application No.

10/088,895

Examiner

GWEN LIANG

Applicant(s)

BIETTRON ET AL.

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to applicant's amendment filed on 7/18/2005.
2. ☒ The allowed claim(s) is/are 14-26.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date 08292005.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 08292005.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

1. This action is responsive to communications regarding the applicant's amendment, filed on 7/18/2005.

Response to Arguments

2. Applicant's arguments filed on 7/18/2005 with respect to the last office action have been fully considered and are persuasive in view of the applicant's amendment filed on 7/18/2005. Therefore, the objections to the specification and rejections under 35 USC 101, 112 and 103 have been withdrawn.

Drawings

3. The amended drawings were received on 07/18/2005. These drawings are acceptable subject to correction of the informalities indicated below:

The label "ELEMENTS CHARACTERISTIC OF THEME" and the reference number "22" of both of the symbols of Element 22 in Figure 2 need to be shown clearly to illustrate the claimed invention concept.

In order to avoid abandonment of this application, correction is required in reply to the Office action. The correction will not be held in abeyance.

EXAMINER'S AMENDMENT

4. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as

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provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Carl Brundidge on 29 August 2005.

In the claims:

Replace claim 14 with the following text.

14. A method of thematically classifying documents, in particular for making up or updating thematic databases for a search engine, the method comprising the following steps:

- manually and/or automatically selecting a sample of documents representative of each theme;
- automatically identifying within the selected documents elements that are characteristic of each said theme;
- automatically allocating a coefficient to each identified element, wherein said coefficient is representative of a relevance of said element to a corresponding theme;
- downloading documents from a computer network;
- for each downloaded document to be classified, identifying said theme-characterizing elements that are contained in the document for each said theme, and for each theme corresponding to the elements, using the coefficients allocated to said elements to calculate a characteristic value representative of the relevance of that theme for the document, in order to decide whether or not the document relates to the

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theme, said theme--characterizing elements identification and calculation steps being performed automatically for each document downloaded from the computer network;

- automatically classifying the downloaded documents as a function of themes with which they deal;

- automatically storing the documents classified thematically in databases that can be interrogated on the basis of themes contained in a request; and

- making the databases available to users who interrogate the databases on the basis of themes contained in a request;

and the step of allocating said coefficient to each identified element comprises the following steps for each theme:

- automatically calculating a frequency of the element in the selected documents relating to the theme;

- automatically calculating a frequency of the element in the selected documents that do not relate to the theme; and

- automatically calculating a ratio of the calculated frequencies of the theme-related element and of the non-theme-related element.

Replace claim 16 with the following text.

16. A method according to claim 14, wherein the step of automatically calculating the characteristic value representative of the relevance of the theme of a document for classification comprises the following steps, for each theme:

- reading the value of the ratio of said frequencies for each theme-representing element extracted from the document;

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- multiplying together the values of the ratios_{as} read for the theme-characterizing elements; and

- allocating the result of the multiplication to the characteristic value.

Replace claim 18 with the following text.

18. A method according to claim 17, wherein the threshold value for each theme is automatically determined on the basis of the frequency ratio using the following relationship:

$\text{score} - \text{threshold}_{\text{theme}} = (R_{\text{mean}}) \text{ theme } n$

in which:

$\text{score} - \text{threshold}_{\text{theme}}$ designates the threshold value;

R_{mean} represents the mean value of frequency ratios R of the elements of the theme; and

theme - n designates a predetermined number.

Replace claim 21 with the following text.

21. A method according to claim 14, wherein for each vocabulary element of a request formulated by a user, coefficients are automatically calculated that are characteristic of the element relative to each known theme, and each element is associated with the corresponding themes and coefficients, so that said coefficients reach a minimum value.

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Replace claim 22 with the following text.

22. A module for thematically classifying documents, in particular for a search engine, the module comprising a central processor unit having means for comparing elements extracted from each document with elements characteristic of various themes, each element being allocated a coefficient representative of a relevance of said element for a corresponding theme, and means for calculating a characteristic value representative of the relevance of a theme for the document on the basis of the coefficients of said characteristic elements that the document contains, in order to decide whether or not the document relates to said theme, said central processor unit being coupled to means for storing documents classified by theme that can be interrogated on the basis of themes contained in a request, and the module has means for calculating a frequency of the element in the documents relating to the theme, means for calculating a frequency of the element in the documents that do not relate to the theme, and means for calculating a ratio between the calculated frequencies of the theme-related element and of the non-theme-related element.

Replace claim 26 with the following text.

26. A search engine for documents on a computer network, the engine comprising an indexing module for creating and updating thematic databases on the basis of documents downloaded from the computer network, and a module for interrogating thematic databases adapted to supply references of documents corresponding to a request that has been input thereto, the search engine further

comprising a thematic classification module according to claim 22 associated with the indexing module.

Allowable Subject Matter

5. As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).
6. Claims 14-26 are allowable in light of the applicant's amendment and in light of the prior art made of record.

The following is an examiner's statement of reasons for allowance:

In independent claims 14 and 22, the limitation of "the step of allocating a coefficient to each identified element comprises the following steps for each theme: - automatically calculating a frequency of the element in the selected documents relating to the theme; - automatically calculating a frequency of the element in the selected documents that do not relate to the theme; and - automatically calculating a ratio of the calculated frequencies of the theme-related element and of the non-theme-related element; and for each theme corresponding to the elements, using the coefficients allocated to said elements to calculate a characteristic value representative of the relevance of that theme for the document.", taken with the other limitations of the claim, were not disclosed by, would not have been obvious over, nor otherwise fairly disclosed by the prior art of record.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GWEN LIANG whose telephone number is 571-272-4038. The examiner can normally be reached on 12:00 P.M. - 8:30 P.M. Monday and Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN BREENE can be reached on 571-272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

G.L.
31 August 2005


Primary Examiner
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